

# PATENT ABSTRACTS OF JAPAN

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(54) SUN VISOR FOR AUTOMOBILE

(57)Abstract:

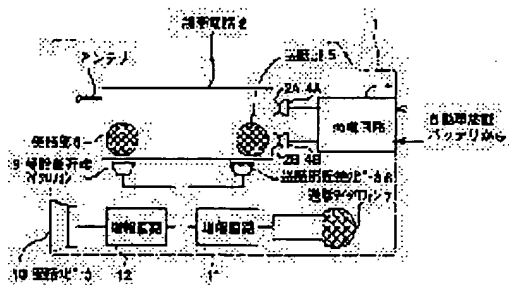
PURPOSE: To eliminate battery exhaustion, and perform in the same way as a driver directly applies a receiver of a portable telephone to his ear and listens by providing charging electrodes, a proximity microphone and a proximity loudspeaker and a transmitting microphone for the driver or the like in a portable telephone hooking installing space of a sun visor.

CONSTITUTION: A hooking installing space 3 of a portable telephone 2 is formed in a sun visor 1, and it is pressed down by elastic force so as not to drop by vibration at traveling time, and charging electrodes 2a

and 2b are provided, and when it is hooked and installed, a charging current is carried from a charging circuit 4.

A transmitting part proximity loudspeaker 6 is arranged in a position in close vicinity to a transmitting part 5 of the portable telephone 2 in a hooked and installed condition, and a receiving part proximity microphone 9 is arranged in a position in close vicinity to a receiving part 8.

A transmitting amplifying line 11 is connected between this loudspeaker 6 and a transmitting microphone 7, and a receiving amplifying circuit 12 is connected between the microphone 9 and a receiving loudspeaker 10, and transmission and reception can be performed on a proper voice level.



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## DETAILED DESCRIPTION

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### [Detailed Description of the Invention]

[0001]

[Industrial Application] This invention relates to the sun visor for automobiles, and relates to the sun visor for automobiles equipped with the cellular phone in detail.

[0002]

[Description of the Prior Art] Conventionally, there is "a sun visor for cars" indicated by JP,63-44818,U as an example of the sun visor for automobiles equipped with telephone equipment or a "land mobile radiotelephone" indicated by JP,64-42645,U. The "sun visor for cars" indicated by JP,63-44818,U has the composition of having prepared the microphone for a call and loudspeaker of a land mobile radiotelephone in the sun visor. On the other hand, the "land mobile radiotelephone" indicated by JP,64-42645,U has composition which arranged all or a part of telephone functions in the sun visor.

[0003]

[Problem(s) to be Solved by the Invention] Since the above-mentioned conventional "sun visor for cars" and the "land mobile radiotelephone" have the structure where the basic function section of a telephone is fixed to a sun visor, they have the problem that it cannot talk over the telephone in the location distant from the car. Then, in this invention, when a cellular phone is hung from a sun visor removable and the cellular phone is hung from the sun visor, while a driver while driving an automobile enables it to talk over the telephone safely, when a cellular phone is removed from a sun visor, let it be the technical technical problem which should be solved to make a call possible outside a car. Furthermore, when the cellular phone is hung from the sun visor, a cell with a built-in cellular phone prevents raising a cell piece by energizing the charging current to a cellular phone.

[0004]

[Means for Solving the Problem] The cellular-phone suspension tooth space where, as for the technical means for the above-mentioned technical-problem solution, a cellular phone is hung removable in the sun visor for automobiles, The charge circuit which the charge electrode of the cellular phone and the electrode which contacts are prepared after said cellular phone has been hung by said cellular-phone suspension tooth space, and changes and outputs the electrical potential difference from the dc-battery of automobile loading to a charge electrical potential difference to the electrode, The transmission microphone whose transmission the driver of an automobile enables also in operation, The receiver loudspeaker whose receiver the driver of an automobile makes possible also in operation, and the transmission section contiguity loudspeaker arranged in the location which approaches the transmission section of the cellular phone after said cellular phone has been hung by said cellular-phone suspension tooth space, The receiver section contiguity microphone arranged in the location which approaches the receiver section of the cellular phone after said cellular phone has been hung by said cellular-phone suspension tooth space, It connects electrically between said transmission microphone and said transmission section contiguity loudspeaker. The transmission amplifying circuit which

the transmission signal outputted from the broadcasting talk microphone is amplified [ amplifying circuit ], and makes transmission voice output to the transmission section of said cellular phone from a transmission section contiguity loudspeaker when it transmits toward a broadcasting talk microphone, It connects electrically between said receiver section contiguity microphones and said receiver loudspeakers. It is making it the configuration equipped with the receiver amplifying circuit to which the voice by which amplified the receiver signal from the receiver section contiguity microphone which gathered the receiver voice uttered from the receiver section of said cellular phone, and sound-reinforcement was carried out from said receiver loudspeaker is made to output.

[0005]

[Function] If a cellular phone is hung by the cellular-phone suspension tooth space, in order that according to the sun visor for automobiles of the above-mentioned configuration the charge electrode of a cellular phone and the electrode of a charge circuit may contact and the charging current may energize from a charge circuit to a cellular phone, it is prevented that a built-in cell will be in a sag condition. When calling a phase hand and talking over the telephone from a cellular phone in the state of the above, or when this cellular phone is called and it talks over the telephone from a phase hand, if the driver of this automobile etc. transmits toward a transmission microphone, the transmission signal outputted from the transmission microphone will be amplified in a transmission amplifying circuit, and transmission voice will be outputted from a transmission section contiguity loudspeaker to the transmission section of a cellular phone. Therefore, it will be in the same transmission condition as a driver brings opening close to the transmission section of a cellular phone and transmits it. On the other hand, if the receiver from a phase hand is emitted from the receiver section of a cellular phone, the receiver voice is gathered by the receiver section contiguity microphone, and since the receiver signal outputted from the receiver section contiguity microphone is amplified in a receiver amplifying circuit, the receiver voice by which sound-reinforcement was carried out from the receiver loudspeaker connected to the receiver amplifying circuit will be outputted. Therefore, it will be in the receiver condition same with attaching and asking a lug directly to the receiver section of a cellular phone for the above-mentioned driver. On the other hand, if a cellular phone is removed from a cellular-phone suspension tooth space, since it will become the usual cellular phone, it can talk over the telephone to arbitration outside an automobile.

[0006]

[Example] Next, the example of this invention is explained, referring to a drawing. Drawing 1 is the block diagram having shown the overall configuration of the sun visor for automobiles which hung the cellular phone, and drawing 2 is the front view of the sun visor for automobiles.

[0007] In drawing 1 and drawing 2, the cellular-phone suspension tooth space 3 where a cellular phone 2 is hung is formed in the sun visor 1 for automobiles. Since it fixes so that a cellular phone 2 may not fall by the oscillation at the time of transit of an automobile etc. in case a cellular phone 2 is hung by the cellular-phone suspension tooth space 3, the presser-foot members 3A and 3B for pressing down a cellular phone 2 by elastic force are formed. Moreover, the cellular-phone suspension tooth space 3 is adjoined, and the charge circuit 4 is formed.

[0008] The above-mentioned charge circuit 4 outputs the stabilization electrical potential difference which suits the charge electrical potential difference of a cellular phone 2 after inputting the electrical potential difference supplied from the dc-battery of automobile loading. And this stabilization electrical potential difference is impressed to Electrodes 4A and 4B. Moreover, since the above-mentioned electrodes 4A and 4B are arranged in the location in contact with charge electrode 2A of the cellular phone 2 in a suspension condition, and 2B, if a cellular phone 2 is hung by the cellular-phone suspension tooth space 3, the charging current will energize them from a charge circuit 4.

[0009] The small loudspeaker is arranged in the location close to the transmission section 5 of the cellular phone 2 in a suspension condition. Since the voice of the level with the voice almost same in having

transmitted directly at the transmission section 5 of a cellular phone 2 about which it spoke toward the below-mentioned transmission microphone 7 is outputted, this small loudspeaker (transmission section contiguity loudspeaker) 6 is formed. The small microphone is arranged in the location which, on the other hand, approaches the receiver section 8 of the cellular phone 2 in a suspension condition. This small microphone (receiver section contiguity microphone) 9 gathers the weak voice uttered from the receiver section 8 of a cellular phone 2, and since sound-reinforcement of it is carried out and it is outputted from the below-mentioned receiver loudspeaker 10, it is formed.

[0010] Between the small loudspeaker (transmission section contiguity loudspeaker) 6 and the transmission microphone 7, an amplifying circuit (transmission amplifying circuit) 11 is connected, and if the audio signal about which it spoke toward the transmission microphone 7 is outputted from the transmission microphone 7, the sound signal will be amplified in an amplifying circuit (transmission amplifying circuit) 11, and will output the voice of the almost same level as having transmitted the transmission section 5 of a cellular phone 2 directly from the small loudspeaker (transmission section contiguity loudspeaker) 6.

[0011] On the other hand, between the receiver loudspeakers 10, an amplifying circuit (receiver amplifying circuit) 12 is connected with the small microphone (receiver section contiguity microphone) 9, and if the signal of the weak voice uttered from the receiver section 8 of a cellular phone 2 is outputted from the small microphone (receiver section contiguity microphone) 9, the sound signal is amplified in an amplifying circuit (receiver amplifying circuit) 12, and sound-reinforcement will be carried out [ voice / which was uttered from the receiver section 8 of a cellular phone 2 / weak ] from the receiver loudspeaker 10, and it will be outputted.

[0012] As shown in drawing 2 , the transmission microphone 7 is arranged in the upper right side of the sun visor 1 for automobiles on a drawing, and the receiver loudspeaker 10 is arranged in the upper left of the sun visor 1 for automobiles on the drawing. Therefore, the driver of this automobile transmits toward the transmission microphone 7, and since the receiver outputted from the receiver loudspeaker 10 can be heard, the driver of this automobile can carry out the call which minded the cellular phone 2, with the handle grasped.

[0013] Moreover, if a cellular phone 2 is removed from the cellular-phone suspension tooth space 3, the cellular phone 2 can be used and it can talk over the telephone freely outside an automobile.

[0014]

[Effect of the Invention] As mentioned above, of course, since the cellular phone is removable, if a cellular phone is removed from a cellular-phone suspension tooth space, it can use the cellular phone that according to this invention a driver while driving an automobile is made as for a call to insurance when the cellular phone is hung from the sun visor, and it can talk over the telephone freely outside an automobile. Moreover, since the charging current is energizing from the charge circuit to the cellular phone when the cellular phone is hung by the cellular-phone suspension tooth space of the sun visor for automobiles, the built-in cell piece of a cellular phone is prevented, and an always good talk state is secured.

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OPERATION

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[Function] If a cellular phone is hung by the cellular-phone suspension tooth space, in order that according to the sun visor for automobiles of the above-mentioned configuration the charge electrode of a cellular phone and the electrode of a charge circuit may contact and the charging current may energize from a charge circuit to a cellular phone, it is prevented that a built-in cell will be in a sag condition. When calling a phase hand and talking over the telephone from a cellular phone in the state of the above, or when this cellular phone is called and it talks over the telephone from a phase hand, if the driver of this automobile etc. transmits toward a transmission microphone, the transmission signal outputted from the transmission microphone will be amplified in a transmission amplifying circuit, and transmission voice will be outputted from a transmission section contiguity loudspeaker to the transmission section of a cellular phone. Therefore, it will be in the same transmission condition as a driver brings opening close to the transmission section of a cellular phone and transmits it. On the other hand, if the receiver from a phase hand is emitted from the receiver section of a cellular phone, the receiver voice is gathered by the receiver section contiguity microphone, and since the receiver signal outputted from the receiver section contiguity microphone is amplified in a receiver amplifying circuit, the receiver voice by which sound-reinforcement was carried out from the receiver loudspeaker connected to the receiver amplifying circuit will be outputted. Therefore, it will be in the receiver condition same with attaching and asking a lug directly to the receiver section of a cellular phone for the above-mentioned driver. On the other hand, if a cellular phone is removed from a cellular-phone suspension tooth space, since it will become the usual cellular phone, it can talk over the telephone to arbitration outside an automobile.

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DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]

[Drawing 1] It is the schematic diagram having shown the overall configuration of the sun visor for automobiles.

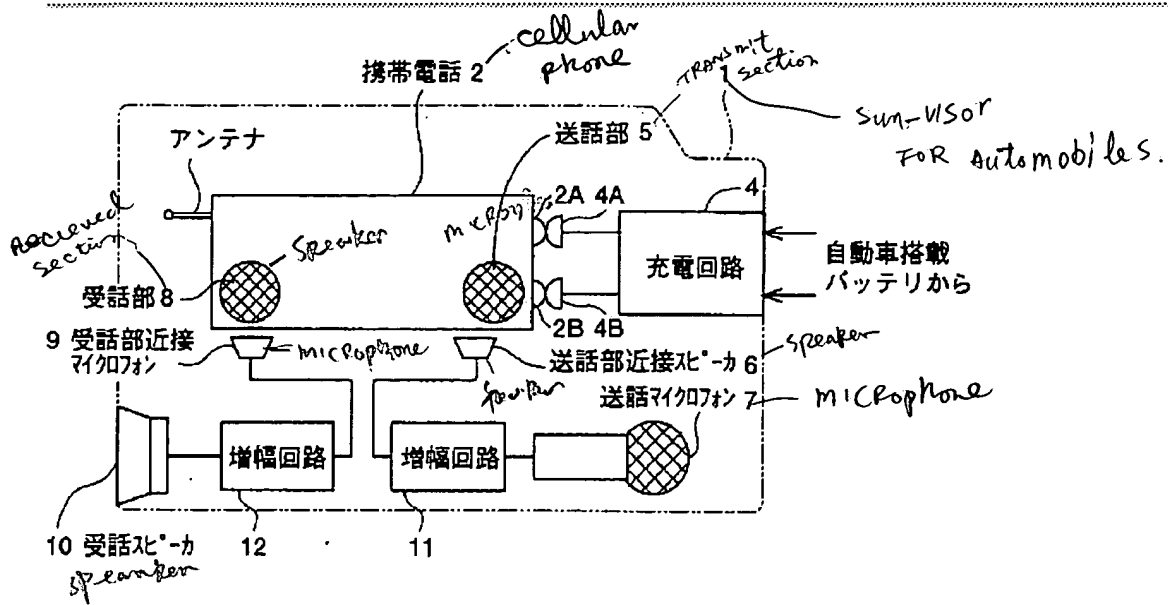
[Drawing 2] It is the front view of the sun visor for automobiles.

[Description of Notations]

- 1 Sun Visor for Automobiles
- 2 Cellular Phone
- 2A Charge electrode
- 2B Charge electrode
- 3 Cellular-Phone Suspension Tooth Space
- 3A Presser-foot member
- 3B Presser-foot member
- 4 Charge Circuit
- 4A Electrode
- 4B Electrode
- 5 Transmission Section
- 6 Small Loudspeaker (Transmission Section Contiguity Loudspeaker)
- 7 Transmission Microphone
- 8 Receiver Section
- 9 Small Microphone (Receiver Section Contiguity Microphone)
- 10 Receiver Loudspeaker
- 11 Amplifying Circuit (Transmission Amplifying Circuit)
- 12 Amplifying Circuit (Receiver Amplifying Circuit)

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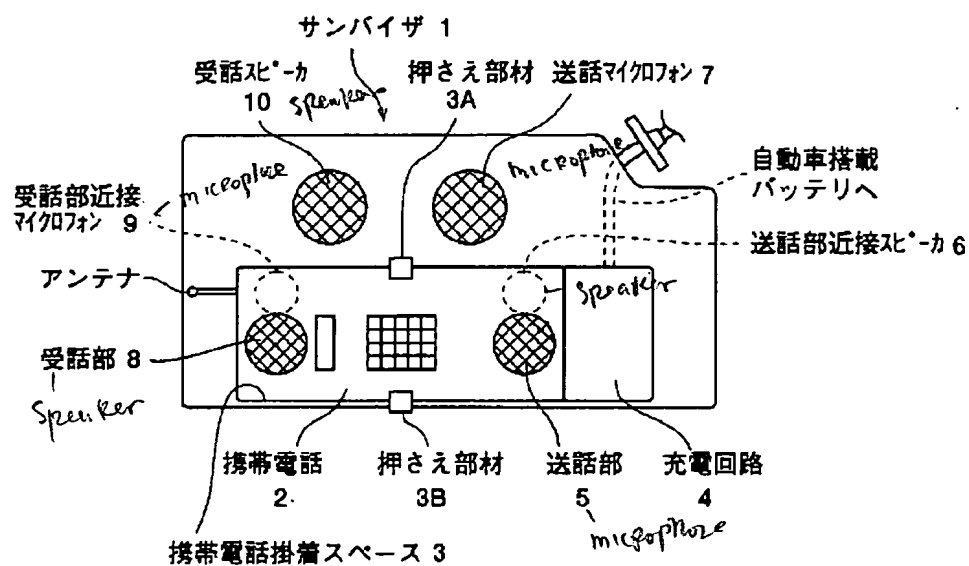
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Drawing selection drawing 1

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Drawing selection drawing 2



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